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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,833	11/09/2001	Hideaki Amano	P 282726	8156

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EXAMINER

LUND, JEFFRIE ROBERT

ART UNIT PAPER NUMBER

1763

DATE MAILED: 11/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/890,833

Applicant(s)

AMANO, HIDEAKI

Examiner

Jeffrie R. Lund

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2003 .
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 9/1, 10, 11/1, 12, and 13/1 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Jang et al, US Patent 5,552,017.

Jang et al teaches a CVD vacuum processing apparatus that includes: a vacuum chamber A; a circular placement stage 7 having a center axis; a circular showerhead 32 having an axis coincident with the center axis of the placement stage; a circular vacuum chamber exhaust port 24 having a center axis; and a vacuum pump to maintain the pressure in the vacuum chamber at a pressure of 10 Pa or less. The exhaust port has a diameter smaller than the placement stage; the center axis of the exhaust port is displaced from the center axis of the placement stage; and the foot-print of the placement stage covers a portion of the exhaust port. The placement stage and showerhead serve as an upper and lower electrode to form plasma during the deposition process. (Figures 2-4, and throughout the specification)

3. Claims 1, 6/1, 7, 9/1, and 13/1 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kamiyashiki Masaru, JP Patent 11-243079.

Kamiyashiki Masaru teaches a vacuum coating apparatus that includes: a vacuum chamber 1; a circular placement stage 4 having a center axis; a circular vacuum chamber exhaust port 2 having a center axis; and a vacuum pump to maintain the pressure in the vacuum chamber at a pressure of 10 Pa or less. The exhaust port has a diameter smaller than the placement stage; the center axis of the exhaust port is displaced from the center axis of the placement stage; and the foot-print of the placement stage covers a portion of the exhaust port. The placement stage and showerhead serve as an upper and lower electrode to form plasma during the deposition process. (Figures 1-6, and throughout the abstract)

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jang et al, US Patent 5,552,017.

Jang et al was discussed above and includes a coating apparatus that includes an exhaust port 24 under a stage 7. The center axis of the exhaust port is displaced from the center axis of the stage.

Jang et al differs from the present invention in that Jang et al does not teach a specific displacement.

It would be obvious to one of ordinary skill in the art to optimize the displacement of the exhaust port. Furthermore, it was held in *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), by the Federal Circuit that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. (Also see MPEP 2144.04 (d))

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the displacement of the exhaust port.

Response to Arguments

6. Applicant's arguments filed October 8, 2003 have been fully considered but they are not persuasive. The applicant argues that Jang et al and Masaru (JP '079) do not teach that the foot-print of the placement stage covers a portion of the exhaust port as claimed. The applicant further argues that Jang et al and JP '079 teach that the placement stage totally covers the exhaust port. The examiner agrees that Jang et al and JP '079 both teach that the placement stage totally covers the exhaust port. The examiner, however, disagrees that Jang et al and JP '079 do not teach covering a portion of the exhaust port. The claim only requires that the placement stage "covers a portion of said exhaust port". The placement stage of Jang et al and JP '079, as

pointed out by the applicant, totally cover the exhaust port. In covering the entire exhaust port they must cover a portion of the exhaust port. The limitation "covers a portion" is very broad and includes the smallest fraction of coverage to totally covering the exhaust port. There is no additional limitation on how much of the exhaust port is covered by the placement stage.

Allowable Subject Matter

7. Claims 2-5, 6/2-5, 8/2-5, 9/2-5, 11/2-5, and 13/2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the apparatus as claimed in claim 2, specifically, the direction of displacement of the center axis (C1) of said exhaust port (9) with respect to the center axis (C2) of said placement stage (3) is a direction opposite to an extending direction of said support part (6) was not found in or suggested by the art. The art teaches supporting a stage from a sidewall (see Redeker et al, EP 0 819 780 A2 or Hanawa et al, US Patent 6,083,344). These references teach that the exhaust port is coaxial with the axis of the support. Any combination with any of the art citing offset exhaust ports would destroy either the offset or the coaxial exhaust port. Furthermore, if this combination is made there is no suggestion as to which direction the exhaust port should be moved.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art teaches the technological background of the invention.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (703) 308-1796. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (703) 308-1633. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read 'JRL', is positioned above the printed name.

Jeffrie R. Lund
Primary Examiner
Art Unit 1763

JRL

November 3, 2003